NOAA
FISHERIES
SERVICE

Southeast Region
Habitat Conservation Divison

# Southeast Region – Habitat Conservation Division Activities & Accomplishments Calendar Year 2009

## Background

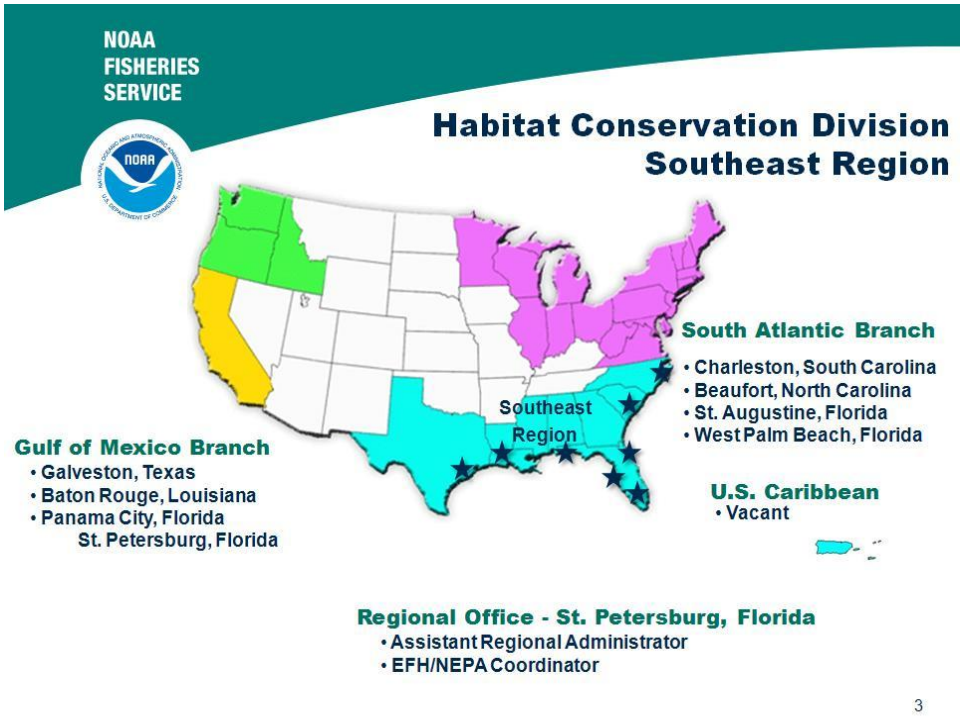
The mission of NOAA Fisheries Service is: *Stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems for the benefit of all Americans*. Coastal and marine habitats are some of the most biologically rich and economically valuable areas on Earth. They provide a range of benefits to our nation by:

- Playing an essential role in the reproduction, growth, and sustainability of commercial and recreational fisheries and protected species.
- Providing recreational opportunities for the public's use and enjoyment.
- Protecting life and property by helping to buffer coastal communities against natural hazards such as storms, coastal flooding, and sea level rise.
- Supporting the biodiversity on which marine and coastal ecosystems depend.
- Site and source of commerce and industry.

The Habitat Conservation Division (HCD) has the responsibility for conducting habitat protection programs in the United States. The HCD protects, restores, and promotes stewardship of these habitats to ensure they are healthy and self-sustaining, which is vital to support living marine resources, human use, and resilient coastal communities. In the southeast United States, HCD concentrates its efforts in the eight coastal states from North Carolina to Texas, and the territories of Puerto Rico and the U.S. Virgin Islands. This document summarizes the Southeast Region HCD and its activities to implement NOAA's trust resource mandates to accomplish NOAA's mission to improve ecosystem health, productivity, and sustainability of the nation's coastal communities.

## HCD Organization

In 2009, a total of 21 biologists and four administrative staff constituted the the Habitat Conservation Division in the Southeast Region. By decentralizing and collocating staff with research, academic, and natural resource management partners, the HCD can more effectively and efficiently implement the habitat protection program in the southeast United States.




The front-line habitat conservation accomplishments are principally achieved through the efforts of divison personnel stationed at offices located strategically thoughout the region. The Division is organized to correspond to the areas under management by the South Atlantic (SAFMC), Gulf of Mexico (GMFMC), and Caribbean (CFMC) Fishery Management Councils.

The Division is administered from the Southeast Regional Office in St. Petersburg, Florida. Staff in St. Petersburg includes the Assistant Regional Administrator, one fishery biologist providing policy and program support and one administrative assistant.

The Gulf of Mexico Branch is managed from Galveston, Texas, and follows the GMFMC's boundaries from the Florida Keys (Gulf of Mexico side) to Texas. This branch has field offices located in Baton Rouge, Louisiana; and Panama City, Florida. The Galveston office is staffed by two biologists located at the Southeast Fisheries Science Center's (SEFSC) Galveston Laboratory. Colocated on the campus of Louisiana State University, the Baton Rouge office is staffed by five biologists. The Panama City office is staffed by three biologists. One biologist is located at the SEFSC Panama City Laboratory and two of the biologists are located in St. Petersburg to allow for more efficient coverage of the Gulf of Mexico coast of peninsular Florida.

The South Atlantic Branch is managed from Charleston, South Carolina, and coincides with the SAFMC boundaries from North Carolina to the Florida Keys (Atlantic side). This branch has field offices located in Beaufort, North Carolina; St. Augustine, Florida; and West Palm Beach, Florida. The Charleston office is staffed by three biologists located on the grounds of the South Carolina Department of Natural Resources Marine Resources Center at Fort Johnson. Two biologists staff the Beaufort office located at NOAA's Center for Coastal Fisheries and Habitat Research Laboratory. The St. Augustine office is staffed by one biologist at the Guana Tolomato Matanzas National Estuarine Research Reserve. Two biologists are collocated with the U.S. Environmental Protection Agency (EPA) in West Palm Beach.

From 2002 until 2006, a HCD office with one staff biologist was colocated with the U.S. Fish and Wildlife Service at their facility in Cabo Rojo, Peurto Rico. Budget priorities in fiscal year 2006 required the realignment of that staff to the Southeast Region's Protected Resources Division. HCD activities have since been a collateral duty of staff located in St. Petersburg, Florida. The Division is working on adding a staff biologist and opening an office in San Juan, Puerto Rico, in fiscal year 2011.

## Major Program Activity Areas

### Environmental Review, Consultation, and Pre-consultation Activities

Since inception of the NOAA Fisheries Service Habitat Program in the early 1970's, the Southeast Region has focused primarily on consulting with government agencies, as well as individuals and industries regarding proposed water development and habitat alteration projects. Environmental assessments are made, ecological trade-offs are identified, measures are developed and provided as recommendations to avoid and minimize impact on fishery habitat. The program seeks to minimize habitat losses and promote the successful enhancement, restoration, and creation of fishery habitats. Our overall goal is to accommodate sustainable development while seeking a no-net-loss of wetlands and other aquatic sites. Projects that would result in significant unmitigated loss or damage to fishery habitat are opposed.

One of the principal authorities for protecting and conserving marine fishery habitats are the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The 1996 amendments to the Magnuson-Stevens Act required federal agencies that authorize, fund, or undertake projects that may adversely affect EFH to consult with NOAA Fisheries Service. Through consultation, HCD provides recommendations to federal agencies to avoid, minimize, mitigate, or otherwise offset the effects of their actions on EFH. The review, advisory, and consultative services provided by the HCD to effect conservation and enhancement of fishery habitats largely use existing laws in addition to the Magnuson-Stevens Act, including the Fish and Wildlife Coordination Act (FWCA), Clean Water Act (CWA), the National Environmental Policy Act (NEPA), Federal Power Act (FPA), Coral Reef Conservation Act (CRCA), and others.

**ESSENTIAL FISH HABITAT**

In the Magnuson-Stevens Fishery Conservation and Management Act, Congress defined essential fish habitat (EFH) as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."

According to data maintained by the NOAA Fisheries Service headquarters Office of Habitat Conservation, nearly 6,400 actions were received in 2009 by NMFS regions and habitat conservation offices. Nearly 44% of those were received in the Southeast Region. HCD routinely meets with permit applicants and conducts on-site field investigations of proposed coastal development activities. Staff also engages in formally established processes which provide pre-consultation technical advice to project proponents and regulatory agencies. This up-front effort allows permit and license applicants the opportunity to get project specific feedback early in their planning, and often reduces permitting timeframes as environmental issues are identified and addressed before plans are finalized, and applications submitted. Examples of these efforts include:

- The Galveston District Corps of Engineers Regulatory Division's monthly Joint Evaluation Meetings. These meetings between natural resource agencies and permit applicants provide a forum regarding compliance with applicable laws and regulations, as well as environmental issues and/or concerns for specific proposed projects.
- The North Carolina Merger 01 process streamlines the planning of highway projects by providing a forum for agencies to discuss and reach consensus in order to meet regulatory requirements and individual agency mandates. A 2009 study of low-level bridges in need of repair estimated 8,000 bridges that require replacement by 2020. About 50 percent will cross streams used by diadromous or estuarine fish.
- The State of Florida's Efficient Transportation Decision Making (ETDM) Memorandum of Understanding (MOU) was signed by 23 agencies including NOAA. ETDM provides required access to project and resource data in order to provide input into project development and planning and utilizes an internet-accessible interactive database tool called the Environmental Screening Tool (EST).
- Jacksonville District Corps of Engineers "Regulatory Roadshows." HCD staff joined the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency in a series of public meetings counducted around the state of Florida and U.S. Caribbean, participating on panel discussions regarding regulatory requirements and agency legislative mandates.

## Partnerships and Watershed Planning Efforts

Regulatory programs do not address the full spectrum of conservation challenges nor do they provide all the tools needed for comprehensive habitat conservation. Thus, partnerships are an important mechanism for protecting and conserving aquatic habitat, while continuing to provide ecological and economic benefits. This conservation approach avoids the temporal and spatial loss of ecosystem services, thereby preserving existing habitat functions and benefits and reducing the need for costly restoration and enhancement efforts. A combination of declining budgets, increased demands on capabilities, and new conservation challenges (e.g., climate change, prolonged droughts, and population growth) requires engagement from the broader stewardship community. The HCD works with a variety of partnership entities comprising various federal, state, local as well as private and non-profit groups. The HCD strives to accommodate those partnerships that are mandated or possess the greatest potential to protect coastal fishery habitats.

**ENVIRONMENTAL PROTECTION AGENCY NATIONAL ESTUARY PROGRAM (NEP)**

Established in 1987 by amendments to the Clean Water Act to "identify, restore, and protect nationally significant estuaries of the United States," ten of the twenty-eight NEPs are in the Southeast Region. NEPs are effective, efficient, collaborative, and adaptive community-based programs. HCD interacts with each NEP and participates as a member of several NEP Techincal Advisory, Management, and Policy Committees.

## Fishery Management Coordination and Collaboration

The Magnuson-Stevens Act is NOAA Fisheries Service's primary legislative authority for fisheries management. The Southeast Region has three Fishery Management Councils (FMCs) with twenty fishery management plans (FMPs) encompassing hundreds of marine species to manage. The HCD has a staff person who participates on each interdisciplinary planning team (IPT), which is responsible for developing FMP amendments at the direction of the Councils. In 2009, the HCD had considerable involvement in development of the Gulf of Mexico Fishery Management Council's FMP to regulate and promote environmentally sound marine aquaculture in the Gulf of Mexico exclusive economic zone. Also in 2009, the South Atlantic Fishery Management Council developed Comprehensive Ecosystem-Based Amendment 1 to establish Coral Habitat Areas of Particular Concern to protect approximately 23,000 square miles of deepwater coral systems from the adverse effects of fishing. In addition to participating on IPTs, the HCD reviews fishery management actions for potential effects on fishery habitats.

HCD has a seat on the Habitat Advisory Panels maintained by each Council. Made up of recreational and commercial fishermen, industry representatives, environmentalists and other interested members of the public, these Panels advise Councils on issues relating to fish habitats. HCD also represents NOAA habitat concerns on related committees of the Atlantic States and Gulf States Marine Fisheries Commissions which coordinate and manage fishery resources within and across state waters.

## American Recovery and Reinvestment Act (ARRA) of 2009

The ARRA provided funding for a vast array of programs and activites of the federal government. The ARRA also provided NOAA $167 million of funding for marine and coastal habitat restoration. HCD staff provided technical assistance through meetings and on-site investigations with individuals, non-governmental organizations, and state agencies with potential restoration projects meeting the ecological restoration, "shovel ready", and job creation goalsof the act. Altogether, the agency received 814 proposals from 34 states and five territories, totaling more than $3 billion in requests. HCD staff were among the more than 200 technical reviewers from across NOAA who worked in groups to review all the applications. Ultimately, a panel selected fifty projects, which when complete, will have restored more than 8,900 acres of habitat and removed obsolete and unsafe dams that open more than 700 stream miles where fish migrate and spawn. The projects also will remove more than 850 metric tons of debris, rebuild oyster and other shellfish habitat, and reduce threats to 11,750 acres of coral reefs.

## Gulf of Mexico Alliance

The Gulf of Mexico Alliance is a regional ocean partnership among the states of Alabama, Florida, Louisiana, Mississippi, and Texas, with the goal of increasing collaboration to significantly enhance the environmental and economic health of the Gulf of Mexico. The Alliance has six priority issue teams with HCD staff serving as a co-Federal facilitator on the Habitat Conservation and Restoration Team. This Team is concentrates its efforts on five focus areas from the Governors Action Plan II:

- Expanded Partnerships targeting private landowners, industry, and Mexico.
    - In 2009, a series of stakeholder workshops were held across the Gulf identifying top habitat issues in each state.
- Policy Changes including coordinating federal funding programs, promoting improvements to regulatory programs, changes to the Federal Standard and coastal zone management policies.
    - Generated interest and support for Federal Standard Working Session
- Science and Technology Development regarding sealevel change, freshwater inflows, restoration science and science-based decision management tools.
    - Two Sea Level Affecting Marshes Model (SLAMM) runs for Jefferson County, Texas and Grand Bay National Estuarine Research Reserve, Alabama/Mississippi.
- Gulf Regional Sediment Management Master Plan.
    - A draft technical framework has been completed.
- Reversing Downward Trend in Habitat and Ecosystem Services

## National Fish Habitat Action Plan

The National Fish Habitat Action Plan is a nationwide, partnership-based investment strategy to increase the return on fish habitat conservation efforts. The Action Plan encourages collaboration between public agencies, private organizations, and citizens to provide ecosystem-wide results. With a network of regional partnerships setting priorities based on scientific assessment and strategic planning, the Action Plan provides a framework for collaborative action to conserve habitats vital to coastal and marine fisheries, which contribute over $70 billion annually to the U.S. economy. NOAA provides leadership in implementing the Action Plan to help sustain these valuable habitats and the communities that depend on them. HCD staff actively participates on the the following NFHAP partnerships:

**Southeast Aquatic Resources Partnership:** NOAA has contributed to a major restoration of nearshore oyster reefs and native vegetation, thereby reducing wave energy, stabilizing shorelines, and improving marine habitat diversity at Florida's MacDill Air Force Base. On the Pascagoula River in Mississippi, NOAA is working with partners to restore tidal marsh habitat affected by Hurricane Katrina and urban development, benefiting multiple species of fish and shrimp. With funding provided by the NOAA Restoration Center and Office of Habitat Protection SARP solicited habitat protection and restoration projects receiving 19 pre-proposals with 15 invited to submit full proposals.

**Atlantic Coastal Fish Habitat Partnership:** HCD staff played a key leadership role in helping to develop this partnership, which stretches from the rocky shores of Maine to the Florida Keys. NOAA's expertise is supporting the development of an Atlantic coastal habitat assessment, which will be used to set protection and restoration priorities for this partnership.

## Gulf of Mexico Branch-Galveston Field Office

### Hurricane Ike Recovery Efforts and Consultations

On September 13, 2008, Hurricane Ike made landfall near Galveston, Texas, as a strong category 2 hurricane, with category 5 equivalent storm surge. HCD staff assisted federal agencies, such as the Federal Emergency Management Agency (FEMA) and U.S. Army Corps of Engineers, on a wide range of recovery activities. Efforts were made to expedite consultation requirements to assist in recovery efforts including those associated with damage to private property and federally maintained infrastructure. Unlike the north section of Galveston Island, Bolivar Peninsula to the north is not protected by a seawall. All existing homes in Canal City were destroyed and many of the original homes were apparently constructed in wetlands. Property owners desire to rebuild, dredge canals, and construct bulkheads. With FERC and Galveston County developing Long-term Community Recovery Efforts for Bolivar Peninsula, HCD provided information on Bolivar's estuarine ecology, habitat issues related to coastal re-development on the peninsula, recreational and commercial fishing community issues. On Galveston Island, the Isla del Sol Marsh Habitat Restoration project (partially funded through NOAA's Community-Based Restoration Program) sustained scouring of dredged material at the site and damage to fill ports in geotube breakwater structures which required repair. Offshore, in the Gulf of Mexico, a rig lost during the hurricane was found when an oil tanker struck the rig; no oil was released from the double-hulled vessel. The rig posed significant navigation and environmental risk due to its location in a lightering zone. HCD consulted on identifying a suitable offshore location to dispose the rig as an artificial reef site.

### Living Shorelines Initiatives

While seawalls and bulkheads, and other methods that "harden" the shoreline provide property owners with erosion protection, they also degrade the ability of the shoreline to provide habitat for aquatic life and to filter storm water runoff. A "Living Shoreline" is a shoreline management practice that addresses erosion by providing for long-term protection, restoration or enhancement of vegetated shoreline habitats. This is accomplished through the strategic placement of plants, stone, sand fill and other structural and organic materials. HCD works with the Galveston Bay Foundation and other partners in offering assistance in designing and creating living shorelines throughout Galveston Bay. Living shorelines are cost efficient alternatives for homeowners sometimes costing up to 50% less than a traditional bulkhead installation. Also, because living shorelines absorb wave energy from boat wakes and wind, they do not contribute to erosion on neighboring properties.

### Snake Island Cove Marsh Protection Project

Snake Island Cove is a 900-acre shallow water, marsh-lined cove located in the Galveston Bay watershed. A review of historic aerial photography using GIS revealed that over 200 acres of seagrasses, present in 1956, were reduced to small patches and the intertidal marsh was eroding at a rate of five feet per year. Phase I of the project received partial funding from NOAA's Community-based Habitat Restoration Program (CRP) and involved the construction of 4,100 feet of breakwater resulting in the protection of 200 acres of marsh and the creation of 65 acres of shallow water habitat for seagrass establishment. Phase II has been awarded, with partial funding from NOAA, to complete the remaining 1000 feet of breakwater construction. Other partners include the adjacent landowners, Restore America's Estuaries, the NOAA Restoration Center, US Fish and Wildlife Servic Coastal Program, U.S. Army Corp of Engineers, Fish America Foundation, and Cheniere Energy. (PHOTO CREDITS: Galveston Bay Foundation)

## Gulf of Mexico Branch- Baton Rouge Field Office

### Port Fouchon Expansion


The HCD played a key role in securing conservation measures to compensate for adverse essential fish habitat impacts associated with a major port expansion. Located in southern Louisiana, Port Fouchon supports 90 percent of the deepwater oil and gas exploration and production in the Gulf of Mexico, and serves as a delivery hub for about 18 percent of the nation's total oil supply.

Compensatory measures included the creation of 1,000 acres of marsh and maritime ridge in Lafourche Parish. Based on NOAA Fisheries Service recommendations, tidal creeks and other fishery access pathways will facilitate marine fishery access to the created marsh areas that serve as nursery habitat for a large number of economically and recreationally important finfish and shellfish species.

### Sempra LNG Terminal – Wetland Restoration / Beneficial Use of Dredged Material

HCD staff worked with Sempra LNG who was proposing to construct a liquefied natural gas (LNG) terminal in Cameron Parish to use sediment generated from the dredging of a berthing slip to create marsh in shallow water areas near the terminal. During pre-application meetings and site investigations, staff identified appropriate areas near the terminal that provided good potential for low cost, successful placement of dredged material to create marsh. The applicant developed a disposal plan with input from HCD and construction of the Sempra LNG terminal was largely completed in 2009. As a result of HCD actions, more than 400 acres of shallow water bottoms were restored to marsh elevations. Also at the request of HCD tidal channels were constructed in the disposal area. These channels increase habitat diversity, marsh edge (an especially productive category of fishery habitat), and marine fishery access to portions of the disposal area that are higher in elevation. Wetland vegetation colonized the subaerial sediments, and now most of the project area would be categorized as brackish and saline marsh. Such habitats are very productive categories of EFH and are rapidly disappearing in coastal Louisiana due to sea level rise, subsidence, and erosion. While the project was intended to serve as compensatory mitigation for construction-related impacts to marsh, Sempra was only required to construct about 55 acres of marsh. The HCD recommended disposal methods were less expensive and avoided adverse impacts to wetlands that could have resulted from alternative disposal methods and offsite disposal areas.

## Coastal Wetlands Planning, Protection, and Restoration Act

To address coastal wetland losses of 25 to 35 square miles per year in Louisiana the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), also known as the Breaux Act, required the Secretary of the Army to establish a Task Force comprised of the Departments of Commerce (NOAA Fisheries Service), Interior, Agriculture, the U.S. Environmental Protection Agency, and the State of Louisiana.

The Habitat Conservation Division supports the NOAA representative on the Task Force and is active in CWPPRA activities. Each year a Priority Project List (PPL) of coastal habitat protection and restoration projects in the State of Louisiana is submitted to Congress. Utilizing the Sport Fish Restoration Account, funded by gasoline taxes attributed to fuel used by small engines, annual federal funding averages $50-60 million.

In 2009 there were 114 active projects on 19 PPLs which would protect and/or restore 110,415 net acres of coastal wetlands.

- 82 projects completed
- 15 projects under construction

In fiscal year 2010 twelve projects are scheduled for construction which would protect and/or restore 3,088 net acres of coastal wetlands.

# Gulf of Mexico Branch – Baton Rouge Field Office

## Coastal Wetland Planning, Protection and Restoration Act Projects

### Pass Chaland to Grand Bayou Barrier Shoreline Restoration

Sponsored by NOAA Fisheries Service, this $42.9M CWPPRA project was under construction in 2009 and required significant project and contract oversight by HCD staff. Wetlands, dune, and swale habitats within the project area have undergone substantial loss due to subsidence, absolute sea-level rise, and marine and wind-induced shoreline erosion. In addition, oil and gas activities, such as pipeline construction and dredging of access canals, have also contributed to the loss. Marine processes acting on the abandoned deltaic headlands rework and redistribute previously deposited sediment. Fragmentary islands have developed due to the breaches in the barrier headland. Subsequently, increased tidal prism storage (the total volume of salt water that moves in and out of a bay with the tide) and storm related impacts have led to inlet and pass formation across the newly formed islands. The Bay Joe Wise beach rim has receded and decreased to a critical width that is susceptible to breaching. A marsh platform approximately 1,000 feet wide will be created contiguous with the northern side of the gulf shoreline of Bay Joe Wise. Approximately three million cubic yards of sediment would be dredged from the Pas la Mer Ebb-Tide Delta, Pass Chaland Ebb-Tide Delta, and Grand Pass Ebb-Tide Delta. The project will also include the construction of approximately 10,000 feet of 4-foot wide, 2-foot deep tidal creeks or water exchange channels.

### Grand Liard Marsh and Ridge Restoration

This NOAA Fisheries Service sponsored project was authorized for full engineering and design in 2009. Bastion Bay and Grand Liard were historically structured by a series of north south bayous and associated ridges. Over the preceding decades the majority of these bayou ridges and the marshes flanking them have disappeared. The Grand Liard ridge is the most prominent remaining ridge, and separates the open bays of Bastian Bay and Grand Liard. Past land loss projections indicate the remaining bayou bank wetlands will be completely converted to open water by 2050. The conceptual project design includes the creation of approximately 328 acres of marsh and nourishment of an additional 140 acres of existing marsh. The project concept also includes restoration of a ridge on the east bank of Bayou Grand Liard. Approximately 50% of the created marsh will be planted upon construction with plugs of smooth cordgrass, and the entire ridge will be planted with appropriate woody vegetation. As well, high marsh species will be planted on the slopes of the ridge. After settlement, the containment dikes will be gapped to encourage establishment of natural marsh hydrology and fisheries support functions.

## Gulf of Mexico – Panama City Field Office

### Mississippi – Alabama Habitats Tool

Partnering with the Mobile Bay National Estuary Program (NEP), The Nature Conservancy (TNC), Mississippi-Alabama Sea Grant, the Dauphin Island Sea Lab and NOAA's Coastal Services Center, the Southeast Region's HCD and the NOAA Fisheries Service Office of Habitat Conservation provided funding, under the auspices of the Cooperative Habitat Protection Program (CHPP), for updating the Mobile Bay NEP's Habitat Acquisition and Restoration Atlas.

The Mobile Bay CHPP project updated the 2004 *Conserving Alabama's Coastal Habitats: Acquisition and Restoration Priorities for Mobile and Baldwin Counties* atlas. In light of changing conditions, the report and static maps were revised to incorporate new and additional habitat and land use data, information on habitat stressors (such as long-term temporal stressors of climate change and sea level rise), and consideration of a range of implementation strategies. HCD staff were active participants of the NEP's Coastal Habitats Coordinating Team who developed the *Prioritization Guide for Coastal Habitat Protection in Mobile and Baldwin Counties, Alabama.* The project incorporated the interactive functionality of a geographic information system (GIS) and NOAA Coastal Services Center's Habitat Priority Planner tool to strategically identify habitats for protection and allows users to assess priorities in light of ongoing landscape change. The Mississippi-Alabama Habitats Tool can be accessed at: http://habitats.disl.org/

### Cooperative Habitat Protection Partnerships Program

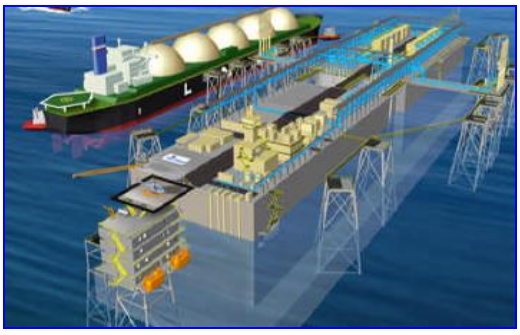
Cooperative Habitat Protection Partnerships (CHPP) emphasize non-regulatory approaches at the regional and community level to supplement traditional regulatory activities to protect fi sh habitat.

NOAA Fisheries Service's commitment to fish habitat reflects the environmental and economic implications of habitat degradation, and the benefits of collaborative conservation efforts.

CHPPs works through NMFS regional staff to provide funding and technical assistance for habitat protection efforts like small-scale fish habitat mapping and assessment, community and watershed planning that take living marine resources into account, upgrading or replacing structures to be more habitat-friendly and promoting local stewardship and marine resource awareness.

## Gulf of Mexico – Panama City Field Office

### Liquified Natural Gas Deepwater Ports



HCD staff continued to consult on several proposed liquefied natural gas (LNG) facilities regulated by the U.S. Coast Guard under the Deepwater Ports Act. TORP Terminal LP-Bienville Offshore Energy Terminal (BOET) proposed to construct an LNG facility in the Gulf of Mexico, 62.6 miles south of Fort Morgan, Alabama. Also, the Port Dolphin LNG facility was proposed for construction approximately 30 miles offshore of Tampa Bay, Florida. These facilities proposed to utilize open flow-through systems requiring 125-150 million gallons per day (mgd) of seawater to heat and regasify LNG in addition to LNG carrier cooling water requirements of 25 mgd. Operating these facilities in this manner would subject early life stages of marine species to entrainment, impingement, thermal shock, and water chemistry changes. NOAA Fisheries Service consistently recommended the use of a closed-loop regasification system throughout the license review process for these facilities. Both facilities were ultimately modified to closed-loop systems reducing water intake requirements to approximately 25 mgd for floating regasification unit operations and LNG carrier engine cooling and ballast requirements. The facilities were approved with HCD recommended ichthyoplankton studies which were under development through coordination with state and federal natural resources agencies, acedamia, and the U.S. Coast Guard.

## South Atlantic Branch – Beaufort Field Office

### Potash Corporation of Saskatchewan, Inc. Proposed Mine Expansion

HCD staff worked closely with the U.S. Army Corps of Engineers, resource management agencies and the Potash Corporation of Saskatchewan, Inc. (PCS) to minimize the impacts of a major mine expansion representing the largest single source of disturbance to wetlands in the southeastern U.S. in several decades. Located near Aurora, North Carolina, the PCS phosphate mine is the largest employer in Beaufort County, making it important to support operational needs while minimizing adverse impacts to essential fish habitat.

PCS proposed to expand the existing mine to three adjoining areas totalling over 10,000 acres including 4,135 acres of wetlands. The footprint of mine expansion was adjusted considerably to avoid and minimize impacts to primary nursery areas and portions of a National Heritage wetland.

Compensatory mitigation will include the restoration of 7,968 acres, 756 of wetland enhancement, and 2,472 acres of wetland preservation in addition to reclamation of the mined lands. As a result of HCD's efforts, the mine will avoid primary nursery areas and pristine bottomland hardwood forests, and the project will include a multi-million dollar adaptive monitoring and management program that will gauge indirect impacts to tidal creeks and marsh communities and guide the accompanying habitat restoration efforts.

### Clean Water Act Section 404 Permits

In 1972, Section 404 of the Clean Water Act established a program to regulate the discharge of dredged or fill material into waters of the United States. The program is jointly administered by the U.S. Army Corps of Engineers and the Environmental Protection Agency. The fundamental rationale of the program is that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to aquatic resources or if significant degradation would occur to the nation's waters. Permit evaluation follows a sequence process that encourages avoidance of impacts, followed by minimizing impacts and, finally, requiring mitigation for unavoidable impacts to the aquatic environment. This sequence is described in the guidelines at Section 404(b)(1) of the Clean Water Act.

To ensure the protection of living marine resources, including anadromous fish, and their habitats, it may be necessary to elevate Section 404 permit decisions made by U.S. Army Corps of Engineer' District Engineers for consideration at a higher level within the Department of Army. The threshold for elevating individual permits is defined as substantial and unacceptable impacts to aquatic resources of national importance.

While very few permit decisions are elevated, both the NMFS and the U.S. Fish and Wildlife Service took necessary steps to reserve their rights to elevate the PCS Mine expansion permit. However, through efforts of agency staff throughout the consultation process, modifications were made to the project resulting in an acceptable project design for the applicant and natural resource agencies.

PHOTO: Through efforts of HCD staff this primary nursery area, designated by the state of North Carolina as special habitat and by the South Atlantic Fishery Management Council as a Habitat Area of Particular Concern, will be preserved and enhanced.

## South Atlantic Branch – Beaufort Field Office

### Tar River Instream Flow Study Team

Greenville Utilities Corporation (GUC) has been mandated by the State of North Carolina to reduce groundwater withdrawals by 75 percent by 2018. GUC is currently permitted to withdraw up to 22.5 million gallons per day (mgd) from the Tar River however actual average withdrawals are 10 to 11 mgd with an occasional peak to 16 mgd. HCD is on the study team to assess the potential effects of increased withdrawals. During the drought of 2007, the saltwater wedge in the Tar River came within 10 miles of GUC's raw water intake. GUC is proposing use of a temporary saltwater intrusion barrier when the wedge gets within seven miles of the intake. Issues with the barrier include navigation, fish passage, impacts to EFH as well as habitat fragmentation.

## South Atlantic Branch – Charleston Field Office

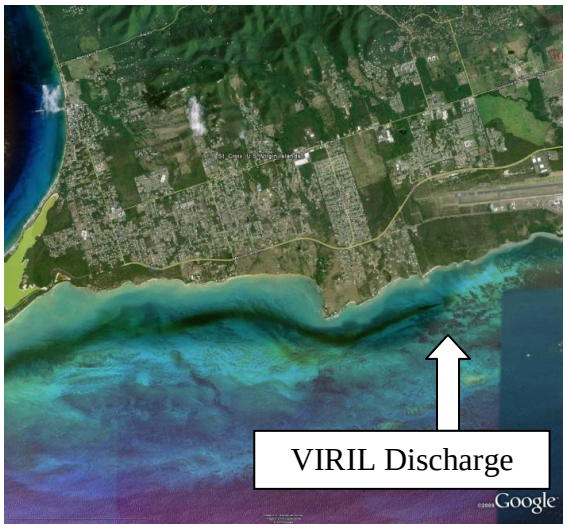
### Savannah Harbor Expansion Project

Soon after the Savannah Harbor was deepened in the early 1990s, the Georgia Ports Authority (GPA) requested that the Savannah District, U.S. Army Corps of Engineers, conduct a reconnaissance study to determine whether increased capacity of the navigation channel was warranted. In 2008, the Corps initiated additional analyses of the study including economics, engineering and environmental issues with agencies – NOAA Fisheries Service, the GPA, USFWS, EPA and State natural resource agencies – cooperating in the preparation of an Environmental Impact Statement. HCD has been working in concert with the Southeast Region's Protected Resources Division identifying impacts to NOAA trust resources including degradation in water quality from the channel deepening and hydrologic alterations done to reduce loss of freshwater marsh and how those water quality degradations affect shortnose sturgeon. NOAA Fisheries Service recommendations have included a sill, as mitigation, within the lower Middle River to restrict the increase of salinity within the Middle River that would occur with the proposed deepening of the adjacent Front River. HCD also consulted with South Carolina Department of Natural Resources on development of a monitoring plan to investigate potential changes in the infauna, epifauna, and primary demersal fishes of the lower Savannah River.

## South Atlantic Branch - Caribbean Field Office

### Virgin Islands Rum Industries, Ltd. - Territorial Pollution Discharge Elimination System Permit

Virgin Islands Rum Industries, Ltd. (VIRIL) is a rum manufacturing facility located in Fredericksted, St. Croix, U.S. Virgin Islands that has been in operation since 1760. The manufacturing process generates wastewater that is discharged in 18-feet of water off the south coast of St. Croix. The effluent forms a visible plume that disappears approximately six miles westward where the shallow shelf drops off to depths exceeding 600 feet. The Caribbean Basin Economic Recovery Act of 1983 exempted certain portions of the Clean Water Act for rum manufacturing. Sampling and monitoring reports by the U.S. Environmental Protection Agency brought the exemption into question and a March 2008 Territorial Pollution Discharge Elimination System Permit (TPDES) included a compliance schedule to implement a treatment option to eliminate or treat the discharge by March 2012. HCD staff maintained coordination with U.S. Fish and Wildlife Service, U.S. EPA Region 2 and the U.S. Virgin Islands Department of Planning and Natural Resources to ensure TPDES milestones were met.



## South Atlantic Branch – Diadromous Fish Restoration

### Steeles Mill Dam Removal

Steeles Mill Dam was constructed during the late 1800's to provide water power for a textile mill, and later was converted to hydroelectric power. The project was abandoned in 1999. Located on Hitchcock Creek, a tributary of the Pee Dee River, near Rockingham, North Carolina the dam blocked fishery access to approximately 12 miles of riverine habitat for migrations of striped bass, American shad, blueback herring, and American eel. Removal of the dam reflected a 10-year effort led by the city of Rockingham, American Rivers, and NOAA Restoration Center with supporting contributions from HCD and state resource agencies.

### Cape Fear Lock and Dam 1

Lock and Dam 1 is the first of three locks and dams maintained by the U.S. Army Corps of Engineers on the Cape Fear River. The dam crest is 275 feet long, the base about 50 feet wide, and the dam crest elevation is +11.0 feet. Establishment of fish passage for shortnose sturgeon at Lock and Dam 1 is required by a Biological Opinion issued by the SER in August 2000 as part of the authorization to improve the federal navigation channels within the Port of Wilmington. After nearly 10 years of failed attempts to establish passage for sturgeon, the COE received funding under the American Recovery and Reinvestment Act to stabilize the scour hole at the base of the dam, a critical first step to establishing passage. HCD and other natural resource agencies worked with the Corps to prepare the funding request.

### Roanoke Rapids Hydroelectric Project

The Diadromous Fish Restoration Technical Advisory Committee for the Roanoke Rapids Hydroelectric Project monitors Federal Energy Regulatory Commission-related fish passage issues at the Roanoke Rapids Dam by Dominion Power Corporation and helps design and oversees biological studies. American shad released above the uppermost dam displayed considerably more movement into the rivers than observed in earlier years with evidence of coordinated fish movements within release groups. The American Eel Workgroup was established to monitor the development of the American eel passageway at the dam. The Workgroup assisted with design and biological monitoring studies to determine the effectiveness of the passageway. Other activities included tailrace sampling, tributary sampling of transported eels, and flume studies. The discovery and repair of cracks in Dam delayed construction of two eelways which should be completed by early 2010.

### Saluda Hydroelectric Project

HCD staff participated in a series of interagency meetings with stakeholders including South Carolina Department of Natural Resources, the U.S. Fish and Wildlife Service, Trout Unlimited, and American Rivers regarding FERC re-licensing of the South Carolina Electric & Gas Company (SCEG) Saluda Hydroelectric Project. The project is located on the lower Saluda River in the Santee River Basin. NOAA Fisheries Service provided recommendations for fishery and aquatic resources affected by the project and recommended license terms and conditions to FERC which focused on instream flows needed to support the spawning habitats of anadromous fish, a monitoring program for shortnose sturgeon, and necessary improvements to the concentrations of dissolved oxygen within water released to downstream rivers. A reservation of authority to prescribe fish passage under Section 18 of the Federal Power Act was also included.

**FEDERAL ENERGY REGULATORY COMMISSION & THE FEDERAL POWER ACT**

The Federal Energy Regulatory Commission's (FERC) process of licensing or re-licensing a hydropower project triggers NOAA's authority under the Federal Power Act. The resulting license conditions govern the operations of the hydropower project for 30 to 50 years. In some cases during this process we protect fish and their habitat by requiring improved fish passage at dams, and by recommending conditions to the license that will protect or improve habitat and fish populations.

We work with the FERC and dam operators to safeguard these species and their habitat by providing protection and fish passage measures in the dam licensing process.

Since FERC licenses have a term of 30 to 50 years, this is a once-in-a-generation opportunity to protect and improve many miles of habitat degraded by changes in water flow and quality from dam operations.

## South Atlantic Branch – West Palm Beach Field Office

### Investigation of Agency Compliance and Enforcement Protocols for Maritime Industry and Coastal Construction Impacts

Through the NOAA Coral Reef Conservation Program, HCD supported a project to review monitoring design efficacy of past permitted coastal construction and mitigation projects in the Southeast Florida Coral Reef Initiative (SEFCRI) region. The project developed a process by which recommendations can be implemented; supports agencies efforts to strengthen permit special conditions to favor coral reef protection; and encourages agencies to fill identified gaps and streamline the regulatory process for all agencies. Another objective of this project was to develop and conduct education and outreach with enforcement agencies regarding coral reef resource protection to help ensure compliance with reef-related laws and permit conditions and promote increased resource agency enforcement response. Phase 1 of this project identified methods to increase the effectiveness of regulatory oversight and compliance monitoring in order to effect improved compliance with regulatory conditions. This information was obtained by researching regulatory agencies policies and practices, compiling a database of reef-related special conditions currently being utilized, conducting interviews with regulatory officials and compliance and enforcement officers and compiling a history of project oversight (lessons learned). During Phase 2 of the project, the contractor will conduct meetings targeting mid- and high-level regulatory compliance and enforcement staff, develop a final recommendations report (recommending specific rule changes) and finalize the coral reef resource awareness training program and materials.

#### Coral Reef Conservation Programm

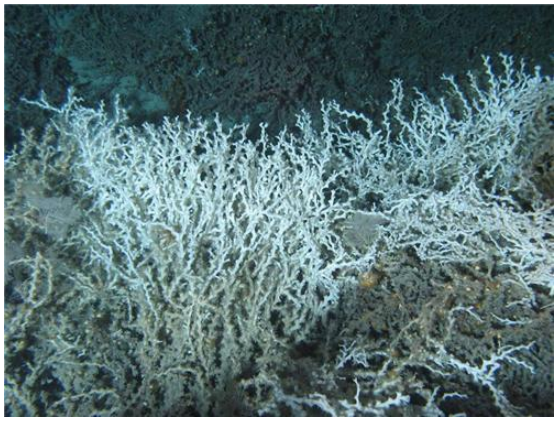
The NOAA Coral Reef Conservation Program (CRCP) is a partnership between the NOAA Line Offices that work on coral reef issues:

- NOAA Ocean Service
- NOAA Fisheries Service
- Office of Oceanic and Atmospheric Research
- National Environmental Satellite, Data and Information Service.

The CRCP brings together expertise from across NOAA for a multidisciplinary approach to managing and understanding coral reef ecosystems.

The Phase I report is available from: http://www.dep.state.fl.us/coastal/programs/coral/reports

### An Analysis and Distribution of Deepwater Commercial Fisheries Species (Golden Crab, Tilefish, Royal Red Shrimp) in Deepwater Coral Habitats off Eastern Florida



Through a CRCP grant, the HCD is funding research being conducted by the Harbor Branch Oceanographic Institute and Florida Atlantic University to prepare an analysis and distribution of deepwater commercial fishery species in deepwater coral habitats of eastern Florida. The project involves the review of video from 142 submersible dives from 2005-2009 to determine the distribution of species in the region, their relationship to coral, sponge and hard bottom habitats; and their relative abundances.

(PHOTO CREDIT: South Atlantic Fishery Management Council/J. Reed HBOI/FAU)

## COMMONLY USED ACRONYMS

| | |
|---|---|
| AIWW | Atlantic Intracoastal Waterway |
| ALDCNR | Alabama Department of Conservation and Natural Resources |
| ASMFC | Atlantic States Marine Fisheries Commission |
| CFMC | Caribbean Fishery Management Council |
| COE | U.S. Army Corps of Engineers |
| CRCP | Coral Reef Conservation Program |
| CWA | Clean Water Act |
| CWPPRA | Coastal Wetlands Planning, Protection, and Restoration Act |
| CZM | Coastal Zone Management |
| DEIS | Draft Environmental Impact Statement |
| DNER | Department of Natural and Environmental Resources |
| DPNR | Department of Planning and Natural Resources |
| EA | Environmental Assessment |
| EFH | Essential Fish Habitat |
| EIS | Environmental Impact Statement |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| FDEP | Florida Department of Environmental Protection |
| FDOT | Florida Department of Transportation |
| FEIS | Final Environmental Impact Statement |
| FERC | Federal Energy Regulatory Commission |
| FIND | Florida Inland Navigation District |
| FKNMS | Florida Keys National Marine Sanctuary |
| FMP | Fishery Management Plan |
| FOIA | Freedom of Information Act |
| FWC | Florida Fish and Wildlife Conservation Commission |
| GADNR | Georgia Department of Natural Resources |
| GDOT | Georgia Department of Transportation |
| GIWW | Gulf Intracoastal Waterway |
| GMFMC | Gulf of Mexico Fishery Management Council |
| GTM NERR | Guana Tolomato Matanzas National Estuarine Research Reserve |
| HAPC | Habitat Areas of Particular Concern |
| HCD | Habitat Conservation Division |
| IRT | Interagency Review Team |
| LCA | Louisiana Coastal Area |
| LDNR | Louisiana Department of Natural Resources |
| LDOTD | Louisiana Department of Transportation |
| LDWF | Louisiana Department of Wildlife and Fisheries |
| LNG | Liquefied Natural Gas |
| LSU | Louisiana State University |
| MAFMC | Mid Atlantic Fishery Management Council |
| MBRT | Mitigation Bank Review Team |
| MMS | Minerals Management Service |
| MSDOT | Mississippi Department of Transportation |
| MSFCMA | Magnuson-Stevens Fishery Conservation and Management Act |
| NCDENR | North Carolina Department of Environment and Natural Resources |
| NCDOT | North Carolina Department of Transportation |
| NEPA | National Environmental Policy Act |
| NGO | Non-governmental Organization |
| NMFS | National Marine Fisheries Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NOD | New Orleans District |
| NOS | National Ocean Service |
| NPS | National Park Service |
| PRD | Protected Resources Division |
| PRDNER | Puerto Rico Department of Natural and Environmental Resources |
| PRDOT | Puerto Rico Department of Transportation |
| PRPB | Puerto Rico Planning Board |
| RC | NOAA Restoration Center |
| SAFMC | South Atlantic Fishery Management Council |
| SAV | Submerged Aquatic Vegetation |
| SCDNR | South Carolina Department of Natural Resources |
| SCDOT | South Carolina Department of Transportation |
| SEFAST | Southeast Florida Action Strategy Team |
| SER | Southeast Region |
| SERO | Southeast Regional Office |
| SFA | Sustainable Fisheries Act |
| SFWMD | South Florida Water Management District |
| SJRWMD | St. Johns River Water Management District |
| TNC | The Nature Conservancy |
| TXDOT | Texas Department of Transportation |
| UMAM | Uniform Mitigation Assessment Method |
| USCG | U.S. Coast Guard |
| USFWS | U.S. Fish and Wildlife Service |
| USVI | U.S. Virgin Islands |
| USVIDPNR | USVI Department of Planning and Natural Resources |
| WVA | Wetland Value Assessment |

## SOUTHEAST REGION - HABITAT CONSERVATION DIVISION
## 2009

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**For more information, please visit us on the internet at:**
**http://sero.nmfs.noaa.gov/hcd/hcd.htm**

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